Strengthening Statistical Systems for Poverty Reduction Strategies Technical Notes and Case Studies

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Technical Note 1: The General Data Dissemination System

The **SDDS** was established in 1996 to guide countries that have, or that might seek, access to international capital markets in the dissemination of economic and financial data to the public. The **GDDS** was established in 1997 to guide countries in the provision to the public of comprehensive, timely, accessible, and reliable economic, financial, and socio-demographic data.

Established by the International Monetary Fund, both the SDDS and the GDDS are expected to enhance the availability of timely and comprehensive statistics and therefore contribute to the pursuit of sound macroeconomic policies; the SDDS is also expected to contribute to the improved functioning of financial markets.

The **SDDS**, in taking a comprehensive view of the dissemination of economic and financial data, identifies four **dimensions** of data dissemination:

- The data: coverage, periodicity, and timeliness;
- Access by the public;
- Integrity of the disseminated data; and
- Quality of the disseminated data.

For each of these dimensions, the SDDS prescribes two to four monitorable elements--good practices that can be observed, or monitored, by the users of statistics.

The **data dimension** lists 17 data categories that provide coverage for the four sectors of the economy, and it prescribes the periodicity (or frequency) and timeliness with which data for these categories are to be disseminated. In recognition of differences in economic structures and institutional arrangements across countries, the SDDS provides **flexibility**. Certain categories are marked for dissemination on an "as relevant" basis. Further, some data categories or components of data categories are identified as encouraged rather than prescribed. With respect to periodicity and timeliness, a subscribing member may exercise certain flexibility options while being considered in full observance of the SDDS.

The **GDDS** framework is also built around the same four dimensions. However, it assumes that significant deficiencies may exit in the statistical system of a country, and its primary focus is on improvement of data quality and statistical practices. It is intended to provide guidance for the overall development of economic, financial, and socio-demographic data. The framework takes into account, across the broad range of countries, the diversity of their economies and the developmental requirements of many of their statistical systems.

The data dimension includes coverage, periodicity (i.e. the frequency of compilation), and timeliness (i.e. the speed of dissemination). The data dimension addresses the development, production, and dissemination of two interrelated classes of data: (1) comprehensive frameworks for each of the four economic and financial sectors (real, fiscal, financial, and external); and (2) indicators for each of these sectors, plus the socio-demographic area. Recommendations for good practices as to coverage, periodicity, and timeliness could be accessed for **comprehensive frameworks** and **data categories and indicators** by clicking on these links.

Contact addresses. The Data Dissemination Standards Division of the Statistics Department is the contact point within the IMF for cooperation with members in work on the SDDS. For further information, please contact the Data Dissemination Standards Division, Statistics Department, International Monetary Fund, 700 19th Street, NW, Washington, DC 20431, USA Telephone: (202) 623 4415, Facsimile: (202) 623 6165 (or 6460), E-mail: **ddsd@imf.org** (Click here to send an e-mail.)

Technical Note 2: International Recommendations and Good Practice for Censuses and Surveys

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Technical Note 3: The Core Welfare Indicators Questionnaire (CWIQ)

The Core Welfare Indicators Questionnaire (CWIQ) is the latest in a series of survey instruments that have been developed by the World Bank and its partners, to help provide policy-makers with household level information for policy formulation and evaluation[1].

By the mid 90's, it was felt that a reassessment of the survey instruments would be useful in the light of the experiences gained in their implementation. It was also felt that there was a need to develop an instrument that could provide policy-makers with quicker feedback and at a more disaggregated level than was possible with the existing range of household surveys. It was in this context that the CWIQ came to be developed.

Objectives of the CWIQ

The CWIQ is intended to monitor poverty and the effects of development policies, programs and projects on living standards. To make useful impact assessments, researchers and policy makers require appropriate indicators of welfare status on different population subgroups. National-level indicators are usually insufficient for planning purposes, and traditional impact indicators that measure changes in welfare status (e.g. percent of the population below the poverty line, number of malnourished children etc.) are expensive and time-consuming to collect. While the periodic collection of such impact indicators is necessary, the CWIQ is intended to be applied frequently (possibly annually), so implementation time needs to be short. The CWIQ employs simple indicators to ultimately identify who is, and who is not, benefiting from various actions designed to improve the social and economic status of the poor.

Key Features of the CWIQ Survey

- A national annual survey which is quick and easy to implement
- Rapid monitoring of key indicators for different population subgroups
- Part of an overall monitoring package
- Short questionnaire and single visit
- Multiple choice questions for easy and rapid data collection
- Scannable data entry to eliminate data entry bottlenecks
- Complete validation specifications and programs
- Standard tabulation plan and programs
- Employs as large a sample as is feasible, given national statistical resource constraints, and the need for rapid results

CWIQ Indicators

The indicators available through the CWIQ survey are of two types: i) indicators of standards of living for the household and household members, and ii) indicators of access, utilization, and satisfaction with community and other basic services (amenities, education, health, etc.). The key indicators include:

Indicators of Living Standards:

[1] For further information please visit http://www4.worldbank.org/afr/stats/cwiq.cfm

- Percent of households reporting diminishing/increasing land assets.
- Home ownership.
- Type of home construction.
- Percent of households using wood, charcoal or crop residues for cooking fuel.
- Type of fuel used for lighting.
- Ownership of selected household goods.
- Mean number of household members.
- Percent of adults who are literate.
- Percent of persons sick or injured in previous four weeks.
- Type of sickness or injury.
- Percent of children who are malnourished.

Access, Utilization and Satisfaction Indicators

- Access to clean water.
- Access to primary and secondary schools.
- Access to local market and public transport.
- Net primary and secondary enrollment rates (by gender).
- Satisfaction with school services.
- Percent of children who do not attend school.
- Reasons for not attending school.
- Primary and secondary drop out rates (by gender).
- Access to medical services.
- Use of medical services by persons sick or injured in previous four weeks.
- Satisfaction with local health service.
- Reasons for nonuse of medical services
- Percent of women with a recent birth who received prenatal care.
- Percent of births delivered in a health facility.
- Percent of births supervised by a formally trained health worker.
- Percent of children who have participated in nutrition programs.
- Percent of children who have participated in weigh-in programs.
- Percent of persons currently employed.
- Percent of persons underemployed.
- Percent of persons unemployed during the previous week

A first step towards a standardized welfare monitoring survey for the Africa region

Technical Note 4: The Living Standards Measurement Study (LSMS) Survey

The Living Standards Measurement Study[2] was established by the World Bank in 1980 to explore ways of improving the type and quality of household data collected by government statistical offices in developing countries. The objectives of the LSMS were to develop new methods for monitoring progress in raising levels of living, to identify the consequences for households of current and proposed government policies, and to improve communications between survey statisticians, analysts, and policymakers. Although the first few LSMS surveys followed a very similar format, as time passed and countries with different circumstances were added, substantial variety arose in the surveys across the different countries.

Two characteristics distinguish LSMS surveys: (i) multi-topic questionnaires designed to study multiple aspects of household welfare and behavior and (ii) extensive quality control features.

Multi-Topic Questionnaires

The main objective of LSMS surveys is to collect household data that can be used to assess household welfare, to understand household behavior, and to evaluate the effect of various government policies on the living conditions of the population. Accordingly, LSMS surveys collect data on many dimensions of household well-being, including consumption, income, savings, employment, health, education, fertility, nutrition, housing and migration.
Three different kinds of questionnaires are normally used:

- the household questionnaire, which collects detailed information on the household members;
- the community characteristics questionnaire, in which key community leaders and groups are asked about community infrastructure;
- the price questionnaire, in which market vendors are asked about prices. A fourth type of questionnaire, school or health facility questionnaires, is sometimes used as well.

Extensive Quality Control Procedures

In order to minimize errors and delays in data processing, LSMS surveys are implemented using procedures that resolve most inconsistencies in the data before they reach the central statistical office. Following elements are distinctive in LSMS surveys, as opposed to those that LSMS surveys share with other good household surveys.

Questionnaire Format. Several features of the questionnaire help to minimize interviewer error. For example, the questionnaire makes extensive use of screening questions so that the skip pattern is automatic, requiring virtually no decision-making by the interviewer. All of the questions are written out exactly as they are to be asked. Almost all potential responses to each question are marked on the questionnaire with a numbered code, and the interviewer writes only the response code on the questionnaire. Further, the household questionnaire is designed so that the data can be entered into the computer straight from the completed questionnaire, thus eliminating the additional step of transcribing codes onto data entry sheets. An important element in the design of the LSMS questionnaire is that changes can be made to the question-

[2] For further information please visit http://www.worldbank.org/html/prdph/lsms/index.htm

naire quickly and easily, either in response to the field test or over the years as policy needs change.

Organization of Fieldwork. Fieldwork and data entry are highly decentralized in full-fledged LSMS surveys. The core work is performed by a team consisting of a supervisor, two interviewers, an anthropometrist, a data entry operator and a driver. The team is based in a regional office equipped with a personal computer for data entry.

The standard fieldwork plan is as follows:

> During round one, which takes a week in each village, two interviewers each administer the household questionnaire to eight households, while the supervisor administers the community and price questionnaires. Following round one in the field, the half-completed questionnaires are taken to the field office, where the data entry operator records the data on computer diskettes. The data entry program prints out the data recorded for each household, highlighting any errors or inconsistencies.
>
> During round two of the interview, the team returns to the field to complete the second half of the questionnaire and to correct errors found in round one. Errors detected after round two are corrected only if they are data entry errors.
>
> In the final step, the diskettes of data are sent from the field office to the national office to be reviewed by the data management specialist and consolidated with data from the other field teams.

Sample Size. LSMS surveys tend to use small samples, often in the order of 1,600 to 3,200 households and rarely more than 5,000 households. Although larger samples would have smaller sampling error, it was judged by survey designers that non-sampling errors would increase more than concomitantly. Having a small number of teams also helps to keep the cost of supplying them with vehicles and computers within bounds.

Data Management. The LSMS surveys use personal computers in the field, where all the stages of data collection, data entry and editing are carried out. This dramatically reduces the length of time between when the fieldwork ends and when the data become available for analysis. It also improves the quality of the data. The use of commercially available packages for this purpose has now become widespread, though the thoroughness of the checks in the full-fledged LSMS surveys is probably well above average even today.

Resulting Data Quality. When all of these procedures are scrupulously followed, data quality can be very high. These data sets were subjected to data entry checks and corrections in the field as explained above, but were not subjected to any further "cleaning" in the central office. Missing data in both surveys are extremely rare.

Turnaround Times. The LSMS is noted for the short turn around time between the end of data collection and the availability of data for analysis. Theoretically, this is a matter of only a week or two, and in several countries basic abstracts have been completed within two to six months of the end of fieldwork. This speed has contributed markedly to the relevance of the data to policymaking. The quick turn around between the completion of fieldwork and the availability of data for analysis is largely due to the pre-coding in the questionnaire, the extensive quality control during the fieldwork, and the decentralized, concurrent data entry.

Technical Note 5: The Use of Administrative Data

Introduction

The use of administrative data is being examined increasingly by NSOs throughout the world, not least because of continuing budgetary pressures to find less expensive ways of collecting data. Administrative data are normally regarded as information which accrues to agencies usually in their capacity as regulators or monitors of certain activities and functions of government. Almost every government activity generates some form of administrative data, the challenge is to identify these sources and to evaluate them. It is also worth noting that the choice between using administrative data and setting up a new data collection is not always an either/or one – in many cases there is scope for using data from one type of source to supplement data from the another source.

Administrative data are generally not collected in their own right, but as a "by-product" of other functions of an agency. For example, a system recording the attendance of children at school, generally asks for and records details about the age and sex of the child, as well as other information related to academic performance. These are extremely useful data items for the generating education statistics and for monitoring both school enrolment as well as performance – why then should the NSO establish an expensive collection to collect data for this purpose?

It is inevitable that there will always be some administrative by-product data in systems outside the NSS which are not being fully utilized. Even if agencies always consulted fully with their the NSS before undertaking any systems development – and they often do not – there will always be items which are of potential interest to the NSS, but are not really in a useable form. This usually cannot be fully resolved because of the trade-off between (a) the resource constraints of the NSS, and (b) the specialist needs of other agencies. National statistical systems simply cannot afford to fund the cost of building their requirements into systems developed for other purposes. At best what can be looked for is consultation and co-operation to minimize costs and maximize the value of what data does exist.

The Advantages of Using Administrative Data

The use of administrative data for statistical purposes has increased substantially in recent times. The Nordic countries have taken the lead in this regard, since administrative data have been included in censuses there for a number of years.

Censuses and household surveys are expensive undertakings in both developed and developing countries. Administrative sources may well cover many more aspects of poverty than censuses or surveys. They are also a much cheaper source of data, for example, a recent study in Denmark estimated that data from administrative sources cost about one seventh of the same information derived from a population census.

While many statistical systems have a strong tradition in designing and carrying out surveys, there is often less experience in exploring the use of administrative data sources. Some of the key advantages of administrative data include:

- Administrative data can be very relevant since they are normally collected to meet a specific need;

- They are usually timely and may well be collected on a frequent basis in contrast to surveys, which may only be carried out infrequently and which take a long time to process and analyze;
- The data are often complete, they cover the whole population reached by the administrative process
- There may well be checks on data accuracy, particularly in relation to financial records that are subject to independent audit;
- The cost of data collection is much less than for survey data;
- The response rate is usually high and the response burden is lessened.

The Challenges Associated with Using Administrative Data

The most important challenges is whether the information collected is fit for statistical purposes? For example, in the UK unemployment data have been collected by recording details of people who register to receive unemployment benefit. However, this definition is not the same as the ILO definition of unemployment, since they are many people who are actively looking for work, but who are not qualified to receive benefit. In addition, political changes to the definition of who is entitled to receive benefit will change the numbers registered as unemployed even when there has been no change in economic conditions. Statistical data derived from service delivery records, for examples in areas such as health and education only cover those people who receive the service. From the point of view of the PRSP, it may be just as important to have data on those who are not covered.

Other problems with the use of administrative data include the following:.

- A lack of control of data quality, the data may change in response to changes in administrative procedures regardless of the underlying indicator we are interested in. Some sensitive data sets may well be subject to political influence..
- Technical problems of accessing and using the data.
- Possible legal barriers to sharing of data for some data sets.
- Problems of comparability between data sets, for example in relation to base years, geographical disaggregations and other variables.
- Limited coverage of the administrative system. For example, a birth and death registration system may only operate in the main cities, or a business licensing ystem may exclude small firms with just a few employees. Typically the coverage of administrative systems is better in urban areas and less complete in more remote rural areas, where poverty is more of a problem.
- Flexibility is an issue of concern

The advantages and disadvantages of using administrative data are summarized in Table 1 below.

Opportunities for Using Administrative Data

Exploring the use of administrative data for poverty monitoring requires a process of regular consultation between statisticians and the agencies responsible for the administration. There is a need to integrate statistical systems and to use administrative data in innovative ways. Areas that need to be discussed include: the use of coding systems, using common geographical regions and areas and training for staff to improve data quality.
Areas that are likely to be particularly important for the PRSP include:

- Health statistics derived from the records kept by health centers, clinics and hospitals;
- Education statistics collected from schools and other educational establishments;
- Records maintained by agencies administering social safety-net programs;
- Vital event registration;
- Records maintained by agencies responsible for water and power distribution;
- Business licensing

Table 1. Administrative data compared with specific NSS data systems

	Administrative data		**Specific NSS data systems**
+	No / minimal cost to NSO	-	Full cost borne by CSO (except where there are partner agencies - rare)
+	Can be very secure in terms of longevity – eg, company taxation; customs; motor vehicle registrations	+	Longevity determined largely by NSO (but increasingly subject to funding support through the annual budget process)
-	Can be vulnerable to changes in policy eg, abolition of certain controls	+	Changes to collection determined by NSO
+	May be associated with very strict editing and controls eg, revenue functions like Tax and Customs	+/-	Editing under control of NSO, but this can be resource intensive
-	Confidentiality – individual records may not be available to NSO for edit/query	+	All records available to NSO
+ -	Sometimes very strict reporting requirements eg, tax – but others can be unreliable despite apparent strength (eg, building approvals)	+	Can impose compulsory response under Statistics legislation – but does this affect data quality?
-	Data items set up for non-NSO purposes	+	Data items, definitions, scope determined by NSO
-	Control by host agency, NSO cannot impose changes	+	NSO has control
+	Coverage – normally 100% of target population eg, tax, customs	+/-	NSO can aim for 100% coverage, but costs often force use of samples
+/ -	Data accessibility – many are electronic, but some require extensive manual transfer	-/+	NSO can determine nature of system processing, but data processing is often burdensome
-	Flexibility – it can be difficult to persuade other agencies to change to meet NSO needs	+	NSO can vary items and procedures at its own discretion
+	Minimises respondent burden	-	Absolute increase in respondent burden
+	Can be benefits to host agency from NSO feedback on the data quality, specialised analyses		
+	Can lead to efficiencies in sharing specialist skills and training		
+	Establishes NSO links to other agency – maximises chance of NSO involvement in future developments (can introduce changes at the margin)		

Technical Note 6: Linking Participatory Poverty Assessments and Quantitative Data

Overview

Sole reliance on either only the quantitative approach or only the qualitative approach in measuring and analyzing poverty is often likely to be less desirable than combining the two approaches. This is because there are limits to a purely quantitative approach as well as a purely qualitative approach to poverty measurement and analysis. Each approach has an appropriate time and place, but in most cases both approaches will generally be required to address different aspects of a problem and to answer questions which the other approach cannot answer as well or cannot answer at all. The need to combine the two approaches in analytical work on poverty cannot be overemphasized.

Combining the Quantitative and Qualitative Approaches

There are three key ways to combine the quantitative and qualitative approaches:

(i) integrating methodologies;
(ii) confirming, refuting, enriching, and explaining the findings of one approach with those of the other; and
(iii) merging the findings of the two approaches into one set of policy recommendations.

Some ways in which the integration of methodologies can be achieved are:

- using quantitative survey data to determine the individuals/communities to be studied through the qualitative approach;
- using the quantitative survey to design the interview guide of the qualitative survey;
- using qualitative work to determine stratification of the quantitative sample;
- using qualitative work to determine the design of the quantitative survey questionnaire;
- using qualitative work to pre- test the quantitative survey questionnaire; and/or
- using qualitative analyses to refine the poverty index.

Confirming or ***refuting*** are achieved by verifying quantitative results through the qualitative approach. ***Enriching*** is achieved by using qualitative work to identify issues or obtain information on variables not obtained by quantitative surveys. ***Examining*** refers to generating hypothesis from qualitative work for testing through the quantitative approach. ***Explaining*** involves using qualitative work to understand unanticipated results from quantitative data. In principle, each of these mechanisms may operate in either direction -- from qualitative to quantitative approaches or vice versa. ***Merging*** involves analyzing the information provided both by the quantitative approach as well as the qualitative approach to derive one set of policy recommendations. The quantitative and qualitative approaches are being increasingly combined in analytical work on poverty, but there remains scope for further strengthening the links between them.

Table 1: Characteristics of the Quantitative and Qualitative Approach

Characteristics	Quantitative Approach	Qualitative Approach
Definition of poverty	People considered poor if their standard of living falls below the poverty line, ie, the amount of associated income (or consumption) with the minimum acceptable level of nutrition and other necessities of everyday life	Poor people define what poverty means, broader definition of deprivation resulting from a range of factors (not simply lack of income/consumption) adopted
Philosophical underpinning	Positivist paradigm: existence of one reality	Rejection of the positivist paradigm: there are multiple forms of reality and, therefore, it is senseless to try to identify only one
Determination of poverty	Determination by external surveyors	Determination through an interactive internal-external process involving facilitator and participants
Nature of variables for which data are collected	Quantifiable, eg, household expenditures on food, unemployment rate	Perception variables reflecting attitudes, preferences and priorities; the number of similar responses with respect to each variable can be added-up, but the variables themselves cannot be quantified
Interview format	Structured, formal, pre-designed questionnaire	Open-ended, semi-structured, interactive
Sampling	Probability sampling	Purposive sampling
Sampling error	Less sampling error but prone to more non-sampling error	More sampling error but tends to reduce non-sampling error
Sample size	Usually 2000-8000 households	From 1-1000 individuals or communities
Geographic Coverage	Wide: typically, national	Small: typically, a few regions, or selected communities
Average time	LSMS: Roughly 2 and a half years for the highest quality survey in a country where year round coverage is desired (one year for planning; one year for field work; six months for initial analytic phase of producing an abstract documenting the data, and setting up other analyses). The planning process can be abridged if. (i) capacity is very high; and/or (ii) there is willingness to compromise on quality. Similarly, the interviewing period can be reduced from one year to something like three months if the ability to cover the whole year with analytic questions is sacrificed. The majority of the surveys compromise on one aspect or the other, so the actual time is almost always lower. Priority Survey: 7 months	Six to nine months for average-sized PRA component of Poverty Assessment; roughly four months for average-sized Beneficiary Assessment. In some situations, the qualitative approach can be time-consuming because of the lead time required for training interviewers and the lengthy process of classifying qualitative findings to analytical categories.
Average cost	LSMS: Roughly $500,000 to $1,000,000 on average; some part of this is often provided in-kind by government and international agency staff so the actual cost to the LSMS	Roughly US $50,000 to $150,000 for (average sized) qualitative component of Poverty Assessment. The Focused Area Study Technique (FAST) which was used to review usage of health

Characteristics	Quantitative Approach	Qualitative Approach
	conducting agency may be lower. Priority Survey: $200,000-400,000 (if nationally representative)	and education facilities in Tanzania as an input to the social sector review was conducted at a cost of about $52,000 and took about fifteen weeks.
Statistical Analysis	Statistical analysis forms an important part of approach	Statistical analysis makes little or no use of it. Triangulation is employed i.e., simultaneous use of several different sources and means of gathering and interpreting information. The expectation is that bits and pieces of information gathered from different sources will yield a pattern of responses. Systematic content analysis and gradual aggregation of data based on themes from the household, group, village, district, and national levels may also be used

Adapted from: Saniya Carvalho and Howard White "Combining the Quantitative and Qualitative Approaches to Poverty Measurement and Analysis" World Bank, Technical Paper Number 366, Washington DC, May 1997

Technical Note 7: International Development Goals and Indicators

GOALS	INDICATORS	
Economic well-being	**Economic well-being**	
Reducing extreme poverty The proportion of people living in extreme poverty in developing countries should be reduced by at least one-half by 2015.	1. Incidence of Extreme Poverty: Population Below $1 Per Day 2. Poverty Gap Ratio: Incidence times Depth of Poverty 3. Inequality: Poorest Fifth's Share of National Consumption 4. Child Malnutrition: Prevalence of Underweight Under 5s	
Social development	**Social development**	
Universal primary education There should be universal primary education in all countries by 2015.	5. Net Enrolment in Primary Education 6. Completion of 4th Grade of Primary Education 7. Literacy Rate of 15 to 24 Year-Olds	
Gender equality Progress towards gender equality and the empowerment of women should be demonstrated by eliminating gender disparity in primary and secondary education by 2005.	8. Ratio of Girls to Boys in Primary & Secondary Education 9. Ratio of Literate Females to Males (15 to 24 Year-Olds)	
Infant & child mortality The death rates for infants and children under the age of five years should be reduced in each developing country by two-thirds the 1990 level by 2015.	10. Infant Mortality Rate 11. Under 5 Mortality Rate	
Maternal mortality The rate of maternal mortality should be reduced by three-fourths between 1990 and 2015.	12. Maternal Mortality Ratio 13. Births Attended by Skilled Health Personnel	
Reproductive health Access should be available through the primary health-care system to reproductive health services for all individuals of appropriate ages, no later than the year 2015.	14. Contraceptive Prevalence Rate 15. HIV Prevalence in 15 to 24 Year-Old Pregnant Women (**1**)	
Environmental sustainability and regeneration	**Environmental sustainability and regeneration**	
Environment (**2**) There should be a current national strategy for sustainable development, in the process of implementation, in every country by 2005, so as to ensure that current trends in the loss of environmental resources are effectively reversed at both global and national levels by 2015.	16. Countries with Effective Processes for Sustainable Development (**3**) 17. Population with [sustainable] Access to Safe Water (**4**) 18. Forest Area as a % of National Surface Area 19. Biodiversity: Land Area Protected (**5**) 20. Energy Efficiency: GDP per Unit of Energy Use 20. Carbon Dioxide Emissions	
General Indicators	**General Indicators**	
Other selected indicators of development *For reference: Population, Gross National Product*	GNP per Capita Adult Literacy Rate Total Fertility Rate Life Expectancy at Birth	Aid as % of GNP External Debt as % of GNP Investment as % of GDP Trade as % of GDP

Notes:

This list is neither exclusive nor comprehensive. It covers goals selected from the series of UN Conferences held in the 1990s known as the international development goals. The selection does not imply any diminished commitment to other goals accepted by the international community, at international conferences or elsewhere.
Like the goals, the indicators are inter-related and should be seen as a whole. They constitute a core set reflecting key aspects of economic and social well being and environmental sustainability. Thus some indicators address more than one goal, but for brevity are shown only once. For example, while water is an environmental resource, access to it directly affects the quality of women's lives and the health of their children. In addition to indicators related to the goals, the set includes some general indicators of development.
The indicators are disaggregated by sex where relevant to measure the extent of gender inequality. This global set covers issues relevant to each country in the world. It does not cover issues that affect only some regions or ecological areas. These should be covered in national indicator sets. Where possible and appropriate, countries should also disaggregate indicators to cover sub-national groupings such as urban/rural, income groups and administrative areas.

[1] Until satisfactory data coverage is achieved on this indicator, the prevalence of HIV infection in all adults will be used.
[2] In addition to the six indicators for each country, two indicators of global environmental resources will be included when presenting global totals: *ozone depletion* and the *accumulation of global warming gases in the atmosphere.*
[3] The DAC Working Party on Environment and Development is currently developing guidelines on how to generate national processes for sustainable development. This work will lead to improvements in this indicator to assess the comprehensiveness of the process and the vigor of implementation. Strategies will need to include references to localized environmental issues, such as *air quality, desertification, marine quality (e.g. loss of mangrove areas/ coral reefs), sanitation*, and *sustainability of the use of water resources.*
[4] It is proposed to develop a measure of sustainability of access to further improve this measure.
[5] Biodiversity is a global issue. It is intended to improve the indicator to score the importance of the areas protected and level of protection in force.

Technical Note 8: Recommendation for Poverty Related Indicators

Data categories	Core indicators	*Encouraged extensions*	Periodicity[1]	Timeliness
Real Sector				
National accounts aggregates	GDP (nominal and real)	*Gross national income, capital formation, saving*	Annual (quarterly encouraged)	6-9 months
Production index	Manufacturing or industrial		Monthly	6 weeks - 3 months for all indices
	Primary commodity, agricultural, or other indices, as relevant		As relevant	
Price indices	Consumer price index	*Producer price index*	Monthly	1-2 months
Labor market indicators	Employment, unemployment, and wages/earnings, as relevant		Annual [2]	6-9 months [2]
Fiscal Sector				
Central government budgetary aggregates	Revenue, expenditure, balance, and financing with breakdowns (debt holder, instrument, currency), as relevant	*Interest payments*	Quarterly	1 quarter
Central government debt	Domestic debt and foreign debt, as relevant, with appropriate breakdowns (currency, maturity, debt holder, instrument), as relevant	*Government guaranteed debt*	Annual(quarterly encouraged)	1-2 quarters
Financial Sector				
Broad money and credit aggregates	Net external position, domestic credit, broad or narrow money		Monthly	1-3 months
Central bank aggregates	Reserve money		Monthly	1-2 months
Interest rates	Short and long-term government security rates, policy variable rate	*Money or interbank market rates and a range of deposit and lending rates*	Monthly	[3]
Stock market		*Share price index, as relevant*	Monthly	
External Sector				
Balance of payments aggregates	Imports and exports of goods and services, current account balance, reserves, overall balance		Annual (quarterly strongly encouraged)	6 months
External debt and debt service	Public and publicly guaranteed external debt outstanding (with maturity breakdown)		Quarterly	1-2 quarters
	Public and publicly guaranteed debt service schedule		Twice yearly (with data for 4 quarters and 2 semesters ahead)	3-6 months
		Private external debt not publicly guaranteed	Annual	6-9 months
International reserves	Gross official reserves denominated in U.S. dollars	*Reserve related liabilities*	Monthly	1-4 weeks

Data categories	Core indicators	*Encouraged extensions*	Periodicity[1]	Timeliness
Merchandise trade	Total exports and total imports	*Major commodity breakdowns with longer time lapse*	Monthly	8 weeks-3 months
Exchange rates	Spot rates		Daily	[3]
Socio-demographic Data				
Data categories	**Core indicators**	***Encouraged extensions***	**Periodicity[1]**	**Timeliness**
Population	Population characteristics Size and composition of the population by standard enumeration units, derived from census, surveys, or vital registration system Dynamics of growth: Vital statistic: births, deaths, and migration	Disaggregation of population and vital statistics data by age, sex, and geographic units, as appropriate. Reporting of mortality rates, crude birth rate, fertility rate, and life expectancy	Annual (Census every ten years)	3-6 months for annual updates 9-12 months for census
Health	Inputs: Measures of current financial, human, and physical resources available to public and private (if significant) health system, including public expenditures on health services; Capacity of health care facilities by location and type of facility, and the number of trained personnel by location and certification Process (service delivery): Measures describing the number of clients served and type of care provided by public and private care providers, including inpatient, outpatient, and preventative care; population served by public health services such as immunizations, sanitation services, and improved water supply. Outcomes Statistics on mortality and morbidity, including mortality by cause and the incidence of disease by location and patient characteristics. May also record behaviors of the population, such as the use of contraceptives, consumption of cigarettes and alcohol.	Private (household) expenditures on health services Disaggregation of data by subnational or regional units, as appropriate Measures of the responsiveness of the health system to non-health aspects of service delivery (for example, waiting time for service, quality of facilities, and client perceptions of the quality of service). Disaggregation of data by subnational or regional units, as appropriate Comprehensive assessment of the burden of disease	Annual	3-6 months following end of reference period

Data categories	Core indicators	*Encouraged extensions*	Periodicity[1]	Timeliness
Education	Inputs: Measures of current financial, human, and physical resources available to public and private (if significant) educational institutions, recorded by level of education or type of program. Process Measures of student progress through school, such as enrollment, dropout, and repetition rates, recorded by level of education and sex of students Outcomes: Educational attainment measured by progress through school, level of educational attainment, or scores on standardized achievement exams	Characteristics of teaching staff, including training, experience, and terms of employment (full or part time) Expenditures by households on education (including fees and other expenses for public or private education) Disaggregation of data by sub-national or regional units, as appropriate Calculation of net enrollment rates (by grade) Disaggregation of data by sub-national or regional units, as appropriate Measures of literacy and numeracy in the population, by age group and sex	Annual	6-12 months following beginning of school year.
Poverty	Income poverty Number and proportion of people or households with less than minimum standard of income or consumption; valuation of minimum consumption bundle. Other poverty measures Measures of deprivation or insecurity used to identify the population living in poverty, such as evidence of malnutrition, endemic diseases, educational achievement, and lack of access to basic services	Measures of the distribution of household or per capita income or consumption. Separate poverty estimates for urban and rural populations or for major regions, states, or provinces. Disaggregation of data by subnational or regional units, as appropriate	3-5 years	6-12 months following the survey

1/ The GDDS should be viewed as encouraging improvements over time in the periodicity and timeliness of data dissemination that are consistent with improvements in data quality. Objectives for timeliness are set out in terms of ranges of time in recognition of the diversity of countries covered by the GDDS.

2/ Periodicity and timeliness for labor indicators are recommended after consultation with the Bureau of Statistics of the International Labor Office.

3/ Dissemination as part of a high frequency (e.g., monthly) publication.

Technical Note 9: Fundamental Principles of Official Statistics

The official statistical information is an essential basis for development in the economic, demographic, social and environmental fields and for mutual knowledge and trade among the States and peoples of the world,

The essential trust of the public in official statistical information depends to a large extent on respect for the fundamental values and principles which are the basis of any society which seeks to understand itself and to respect the rights of its members,

The quality of official statistics, and thus the quality of the information available to the Government, the economy and the public depends largely on the cooperation of citizens, enterprises, and other respondents in providing appropriate and reliable data needed for necessary statistical compilations and on the cooperation between users and producers of statistics in order to meet users' needs,

The following Fundamental Principles of Official Statistics were adopted at the Special Session of the United Nations Statistical Commission 11-15 April 1994. These had previously been adopted during the 47th session of the United Nations Economic Commission for Europe, in Geneva on 15th April 1992.

Principles of official statistics:

1. Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens' entitlement to public information.

2. To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data.

3. To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics.

4. The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.

5. Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents.

6. Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.

7. The laws, regulations and measures under which the statistical systems operate are to be made public.

8. Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.

9. The use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels.

10. Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries.

Case Study 1 Involving Statisticians in PRSP Preparation

The PRSP preparation process

While the arrangements governments put in place to manage the PRSP preparation and to monitor implementation vary from country to country, they often have a number of common components. These include:

- An overall political process, often a cabinet committee or a committee of ministers, chaired by the minister with overall responsibility (for example, Albania, Bolivia, Guinea Bissau, Guyana, Kenya, Moldova, Uganda and Yemen);
- A high-level technical committee that mirrors the political process and will be made up of permanent heads of ministries and other agencies (for example, Cambodia, Cameroon, Chad, Georgia, and Rwanda);
- A technical secretariat that may either be a specially formed unit or perhaps an existing unit in the responsible ministry;
- Specialist working groups that focus on different aspects of the PRSP, one of which may well be monitoring and evaluation.

Monitoring and evaluation

In many countries a number of different agencies may be involved in different aspects of monitoring and evaluation. Coordination of this work may be done through a committee or a working group (for example, Tanzania, Guinea Bissau, Sao Tome and Principe), through the technical secretariat, (for example, Cambodia, Lesotho and Madagascar), or perhaps by an existing agency (Kenya, Mali and Yemen). Many countries distinguish between responsibility for data collection and analysis and use.

Involving statisticians

The managers of statistical agencies become involved in the PRSP process in a number of ways. In some cases they are members of the overall coordinating bodies, usually at the technical level, elsewhere they act as advisors, providing information on demand. In many countries there are clear gaps in the desired indicator set and the involvement of statisticians at an early stage does appear to facilitate the preparation of statistical development plans.

Some examples

Burkina Faso

In the course of implementing the national statistical information strategy drawn up in 1994, and with the help of development partners, the Government has conducted several surveys with a view to raising the quantity and quality of statistics available for users. Ongoing improvements in information output will be achieved by consolidating and strengthening already existing surveys and the data derived from routine management of government departments, such as the statistics produced by the Ministry of Basic Education and Literacy for school staff and infrastructure. Future efforts will also be geared to devising and conducting new surveys likely to improve knowledge of priority areas in the PRSP. This whole set of data-generating activities will feed a

minimum statistical program to support the poverty reduction effort. Moreover, execution and impact indicators will become increasingly important in coming years. To that end, a unit will be set up specifically to coordinate the work needed to:

- Ensure the availability and reliability of pre-identified indicators;
- Prepare the new indicators required to expand monitoring and evaluation of outcomes in all key
- program areas;
- Provoke fresh thinking on optimal ways to distribute financing based on indicator values.

Finally, the appropriateness of creating a national poverty observatory will be studied in the course of 2000.

Cameroon

With a view to (i) monitoring the execution of agreed actions; (ii) measuring the results obtained and their impact on target groups, and (iii) taking the corrective steps deemed necessary, the Government intends to introduce appropriate statistical mechanisms in the area of poverty reduction. These should make it possible to produce timely and reliable indicators selected on the basis of the guidelines, orientations, and constraints identified in the strategy. The Government has already begun discussions with the IMF, within the context of the General Data Dissemination System (GDDS) project, on a list of indicators which will be disseminated through that System's site.

The Government intends to organize this approach in such a way as to ensure the production of indicators on the various dimensions of poverty, in particular monetary poverty and the living conditions and standards of the population. In the medium term, availability of the various indicators will be ensured through statistical gathering based on the results of the third general population census currently being prepared and on a set of surveys on household living conditions. Administrative sources will also be utilized, thus providing annual indicators measuring progress in the supply of key social services.

As regards dissemination of the indicators produced, the Government intends to set up socio-demographic databases and establish a web site. In this context, and in cooperation with the United Nations Population Fund (UNFPA) and the World Bank, work on introducing the socio-demographic database has begun and a web site will be created at the Directorate of Statistics and National Accounting during 2001.

The Government intends to seek external assistance (technical and financial) in order to improve the production of statistics on a regular basis. The Government will work to improve collaboration between the National Statistics Office and sectoral statistical services, particularly in social sectors. The National Statistical Council has already established a medium-term plan for the production of statistics. A three-year rolling implementation program has been set up, as a result of the plan, and will be launched in budget year 2000-01. This program attaches great importance to the compilation of monitoring indicators specifically designed to measure progress on poverty reduction.

Guyana

Program monitoring will involve a large number of institutions including the State Planning Secretariat, Executive Implementation Unit, and the Bureau of Statistics, SIMAP, BNTF and line ministries. A Program Coordinating Unit will be established. Monitoring will be structured on two main levels. First, monitoring of intermediate outputs will focus on progress in reducing income poverty, improving health, raising educational achievement and enhancing the voice of the par-

ticipation of the poor. Most of the information for such outcome monitoring will be drawn from (i) household surveys and repeated exercises under the Statistics Bureau, the Ministries of Health and Education, and the SPS; (ii) public sector investment programs; and (iii) input and output indicator statistics from the line ministries.

Secondly, there will be regular monitoring of the inputs required for action against poverty. This will involve the tracking of public expenditures on poverty reducing activities. Such tracking will include periodic analysis of the benefit of public spending, and of the effectiveness of sectors in utilizing funds. In some instances, monitoring will also involve information on key inputs needed in sectors to deliver services effectively – teachers and books in education, or drugs supplies in health care facilities. It will also include continued monitoring, and public debate, about the composition of expenditures.

NGOs will play a key role in the implementation of the poverty program as public sector resources and implementation capacity is limited. In this context, Government will support the creation of an NGO umbrella organization to coordinate NGO activities; the establishment of NGOs by village communities; and the involvement of Neighborhood Democratic Councils in the planning and execution of programs.

Nicaragua

The government will evaluate the evolution of poverty and assess the SPRS performance in reducing poverty, based on agreed targets and intermediate indicators. Parallel and complementarily to this monitoring and evaluation, the government will maintain surveillance of related macroeconomic indicators and compliance with agreed structural reforms.

The Technical Secretariat of the Presidency will lead the inter-institutional coordination effort. This effort will also require the strong support of civil society representatives and the donor community to build up capacities for a participatory and effective system of monitoring and evaluation. The monitoring and evaluation system will build upon the existing government structures and upon the available instruments to measure poverty and PRSP programs. The Bank of Nicaragua will track key macroeconomic variables, the Ministry of Finance will plan and monitor the government's budget, and SETEC will monitor the physical and financial performance of public investment including programs financed through the supplementary social fund. The National Institute of Statistics and Census (INEC) will collect and process socio-economic statistics.

Rwanda

The interim PRSP and PRSP itself are likely to raise a substantial range of policy issues, which need to be followed up. Responsibility needs to be allocated to specific institutions, under the overall guidance of the National Program for Poverty Reduction. The Inter-ministerial Committee will be supported by the Steering Committee and the Technical Committee of the program.

The MTEF process involves defining clear indicators of inputs and outputs for all areas of public expenditure. It is particularly important to define output indicators for the Priority Program Areas. The Budget Department of MINECOFIN is working with all other ministries to develop a set of output measures, and a preliminary list is given below. The monitoring of poverty outcomes will be coordinated by the Poverty Observatory under the National Program for Poverty Reduction. This unit has been recently established and is developing a set of measures of poverty, which will be regularly monitored, in addition to commissioning specific studies on poverty in Rwanda. This unit will work in very close cooperation with the Statistics Department of MINECOFIN,

which publishes Rwanda Development Indicators annually, and with the Management Information Systems of line ministries.

Rwanda currently has a poor statistical base, because of the destruction of the statistical infrastructure during the war. In order to be able to set meaningful development targets and to monitor progress made over the years in reducing poverty and achieving sustainable growth it is essential to be informed by accurate national statistics. The government is trying to rebuild the statistical system. Statistics are essential to plan and monitor the poverty reduction strategies and to successfully implement a development framework. The development of a statistical system requires the development of a prioritized program of national statistics, where different surveys are conducted regularly and can be compared over time.

Case Study 2 Use of GDDS in PRSP

Developed by the IMF, the GDDS provides a framework for (a) the assessment and development of statistical systems that produce comprehensive economic, financial, and socio-demographic data whose periodicity and timeliness is appropriate to the needs of the user community, and (b) the dissemination of these data. The GDDS seeks to improve not only the quality of the data covered by the comprehensive statistical frameworks and data categories, but also, over time, data dissemination practices with respect to the integrity of the data and access to them by the user community.

The GDDS is a structured process focused on data quality that assists countries in adapting their statistical system to meet the evolving requirements of the user community in the area of economic management, and development, and more particularly in defining, monitoring and evaluating their poverty reduction strategies.

The GDDS fosters sound statistical practices with respect to the compilation and dissemination of economic, financial, and socio-demographic including poverty statistics. It identifies data sets and series that are of particular relevance for economic analysis and the monitoring of social and demographic progress. Particular attention is paid to the needs of users, which are addressed through procedures relating to the quality and integrity of the data, and access by the public to the data.

The goal of the GDDS is to assist countries to improve the quality of outputs of statistical systems. It accomplishes this objective by providing tools to facilitate the identification of needed changes in statistical systems, in particular through the design of statistical development plans. Development plans focus on viewing the statistical system as a *whole*. In this way, the task of establishing priorities such as monitoring and evaluating of progress in poverty reduction is simplified, and resource allocation becomes more effective.

The GDDS includes four categories of social and demographic data: population, education, health, and poverty. Although, not representing the full range of statistics that are relevant for setting or monitoring social policies, these categories represent important areas of statistical activity and the information produced is of great importance to the operation of governments, to the activities of non-governmental and international organizations, and to the civil society in general.

The preparation of Poverty Reduction Strategy Papers in countries such as Bolivia, Cote d'Ivoire, Mauritania, and Uganda was greatly enhanced by using the GDDS framework.

Case Study 3 The Structure of National Statistical Systems

A national statistical agency is a unit of the government whose principal function is the compilation and analysis of data and the dissemination of information for statistical purposes. A statistical agency may be labeled as a bureau, center, or office as long as it is recognized as a distinct entity.

There is no single way of structuring a national statistical agency to achieve these activities. Depending on the needs, resources and the size of the country a statistical agency may be structured in a centralized, decentralized way or a combination of both. Below are some examples of centralized and decentralized systems.

Central Statistical Bureau Of Latvia is an example of a small, centralized statistical system. On 1 September 1919 the Cabinet of Ministers of the Republic of Latvia established the State Statistical Office and adopted the interim regulations on its activity. A principle of strong centralization was laid at the basis of Latvia's statistics. In the subsequent years 7 sections were established – demographic, agricultural, general, industrial, foreign trade, domestic trades, as well as price and labor statistics sections.

The Central Statistical Office of the LSSR established after the World War II functioned within the structure of the corresponding organization of the SSSR. Under the conditions of planned economy the methodology of statistical works, the methods of data collection and processing were strongly centralized and regulated. After the retrieval of sovereignty the Central Statistical Bureau of Latvia started to develop the statistical system on a new basis that was determined by the transition of the country to a market economy.

The Central Statistical Bureau of Latvia (CSB) is a state administrative institution under the supervision of the Ministry of Economy, and it is responsible for the organization of the state statistical work in the Republic of Latvia. When performing its professional duties it is still completely independent from any state power or administrative institution, political party or movement.

The CSB activity is regulated by the Law on State Statistics that Saeima adopted on 6 November 1997, by the CSB regulations, annual state program of statistical information approved by the Cabinet of Ministers, as well as other legislative acts. The basic task of the CSB is to establish in the country a unified system of statistical information based on the international standards and methodology.

The state statistical system is functionally centralized and territorially decentralized. The central office and local statistical offices comprise the structure of the Central Statistical Bureau. There are local statistical offices in every administrative district and major towns. In 2000 the CSB system employed 390 people of which 56% in the central office and 44% in local statistical offices. 7 departments structurally compose the central office of the CSB. In addition to the departments there are 4 independent divisions which are not included in the structures of departments.

Another centralized example for a small country is the **Mauritius Central Statistical Office.** It is a division of the Ministry of Economic Development and Regional Co-operation

The Central Statistical Office (CSO) which was set up in 1948, is the official organization responsible for collection, compilation, analysis and dissemination of all official statistical data re-

lating to all aspects of the economic and social activities of the country. The only fields, which fall outside the purview of the CSO, are:

(i) Health and family planning which are with the Ministry of Health;
(ii) Fisheries with the Fisheries Division of the Ministry of Agriculture; and
(iii) Money, banking and balance of payments handled by the Bank of Mauritius.

The CSO has a technical staff of about 160 of whom 25 are full-fledged professionals. Although the statistical system is centralized, statistical units have been established within different ministries and government departments so as to ensure an efficient service by keeping in close touch with data users in different fields. Currently there are some 65 CSO staff deployed in statistical units located within 13 ministries or departments. Arrangements are also under way for the creation of statistical units in the Judicial Department and the Ministry of Environment.

The last example of centralized system is the **Statistics Norway.** It was established as a separate institution in 1876. Statistics Norway is administratively placed under the Ministry of Finance and the work program and budget is decided upon by the Parliament. Statistics Norway has approximately 900 employees and a budget of 50 million Euro, of which 25 percent is user-financed assignments. The Norwegian statistical system is very centralized and all but a few official statistics are produced by Statistics Norway. The Statistics Act of 1907/1989 gives the legal framework of Statistics Norway's activities as a professional independent institution and for the collection, production and dissemination of official statistics.

The best example for a highly decentralized statistical system is the **United States statistical system.** The United States collected and published statistics long before any distinct statistical agency was formed. Congress has sometimes legislated specific data collection or analysis activities, but frequently the organic act that authorizes a statistical agency is very general. The first U.S. statistical agency was the Bureau of Labor; the second was the Bureau of the Census. In the first case, a widespread public demand for information on the condition of industrial workers led to the formation of the bureau with only very general guidance. In the second case, the Bureau of the Census inherited specific major statistical duties, formerly undertaken by others. The Bureau of Agricultural Economics was another early statistical agency.

Two world wars and the Great Depression led to considerably more emphasis on the need for statistics for decision making both within and outside the federal government, and the number of statistical agencies grew rapidly. Some of these were analytic agencies; others were agencies concerned with a specific subject. In either case, the agency itself, in consultation with perceived potential users of its information, has major responsibility for determining its specific statistical program and for setting priorities. Initially, many of these agencies also had responsibilities for certain policy analysis functions for their department heads. More recently, policy analysis has generally been located in separate units that are not themselves considered to be statistical agencies.

One reason for establishing separate statistical agencies rather than leaving statistical data compilation and dissemination activities as a part of a larger administrative operation is to emphasize the principles and qualities of an effective statistical agency. Another reason is to encourage research and the development of new information in a particular area of public interest. Statistical agencies disseminate data for statistical purposes, not for administrative, regulatory or enforcement uses.

A Framework for Planning U.S. Federal Statistics for the 1980's (U.S. Department of Commerce, 1978) classified 38 agencies into five groupings:

General Coordination Agency
- Office of Statistical Policy in the Office of Information and Regulatory Affairs, Office of Management and Budget

Core Multipurpose Collection Agencies
- Bureau of the Census, Department of Commerce
- Bureau of Labor Statistics, Department of Labor
- National Agricultural Statistics Service, Department of Agriculture

Subject Matter Multipurpose Collection Agencies
- Bureau of Justice Statistics, Department of Justice
- Bureau of Mines, Department of the Interior
- Employment and Training Administration, Department of Labor
- Energy Information Administration, Department of Energy
- Environmental Protection Agency
- Federal Bureau of Investigation, Department of Justice
- Internal Revenue Service, Department of the Treasury
- National Center for Education Statistics, Department of Education
- National Center for Health Statistics, Department of Health and Human Services
- Office of the Assistant Secretary for Policy Development and Research, Department of Housing and Urban Development

Core Multipurpose Analysis Agencies
- Bureau of Economic Analysis, Department of Commerce
- Economics units in the Department of Agriculture
- Federal Reserve Board
- Office of the Assistant Secretary for Planning and Evaluation, Department of Health and Human Services
- Office of Research and Statistics, Social Security Administration, Department of Heath and Human Services
- Research and Special Programs Administration, Department of Transportation

Program Collection and Analysis Agencies

In addition nineteen agencies with statistical activities were listed, but specific units were not identified. These agencies ranged from the Alcohol Drug Abuse and Mental Health Administration to the Veterans Administration.

Another example for decentralized system is the newly modernized **Mexico The National Institute of Statistics, Geography and Informatics (INEGI).** It is the agency responsible for integrating Mexico's systems of statistical and geographic information as well as promoting and orienting the development of informatics in the country.

INEGI has a central structure of 7 general bureau:

- The General Bureau of Statistics
- The General Bureau of National Accounts
- The General Bureau of Geography
- The General Bureau of Cadastral Cartography
- The General Bureau of Informatics Policy
- The General Bureau of Dissemination
- The Administrative Area

Two of them are responsible for producing statistical information on social, demographic and economic issues; two are responsible for geographic, ecological and territorial information; one is responsible for informatics policy; one is responsible for dissemination; and one for the administrative area. In addition, INEGI has a regional structure, which enables it to monitor and service requests for information in the different areas of the country.

In an effort to modernize the Mexican systems of statistical and geographic information, in recent years INEGI has implemented a comprehensive and synchronized program, encompassing several components. In terms of structural change, the most important components of the modernization program are **decentralization** and the **new administrative framework**. Within the decentralization component, the initial strategy involved the finishing of the relocation of INEGI´s headquarters from Mexico City to the city of Aguascalientes. This included completing the construction and adaptation of the building to house the headquarters, completing the transfer of one thousand of a total of three thousand families to Aguascalientes.

In parallel, the 10 Regional Bureau were strengthened by granting them more responsibilities as well as, human, financial and material resources to assist them in their duties. In addition, an INEGI office was opened in each of the 32 states. Thus, INEGI has increased its local and regional presence, enabling it to better meet the information needs of its users nationwide.

Under the New Administrative Framework the Institute was able to obtain technical and administrative autonomy to perform its duties.

Case Study 4 Reviewing the organization and management of a statistical system

Concerned about the decline in the quality and quantity of African statistics, the Addis Ababa Plan of Action for Statistical Development in Africa recommended undertaking a detailed assessment of national statistical capabilities and deficiencies in all African countries. Three categories of countries were identified and one alternative assessment model was assigned to each category. The first group of countries are those where enough national experts make possible undertaking such as assessment without external assistance. The second group of countries includes those where a need might arise for one or two international experts to join the team. The third group of countries is made up of those that require a majority of its members to be international experts. The review process should first determine what are the minimum data needs for defining, monitoring and evaluating the national poverty reduction strategy, then define the production infrastructure required to meet these needs. The basic model to conduct a statistical need assessment include the following steps:

- Review current outputs and assess their relevance to users;
- Determine national priority statistical outputs, their contents and periodicity;
- Define the information production system, including data collection, processing, storage and dissemination capabilities;
- Propose an adequate legislative and institutional framework;
- Propose a statistical development plan.

An actual practice in African countries for which there is adequate documentation in initiating needs assessment is limited. However, three cases, Kenya, Namibia and Chad can illustrate the experience acquired:

The Kenya experience is an example of a comprehensive approach involving review of a country's current and statistical needs for preparing medium and long-term statistical development plan. These plans cover all aspects of the national statistical system, including measures for strengthening institutional and legal aspects, and were carried out by entirely by Kenyan experts. A task force of seventeen experts consisting of users and producers of statistical information drawn from government ministries, parastatal enterprises, private sector, and research and academic institutions conducted the review. An Integrated Statistical Development Plan grew out of this comprehensive review, recommending (i) the re-structuring of the Central Statistical Service into a an independent body, accountable for its decisions; (ii) more accessibility to data by the user's community; and (iii) better coordination of statistical activities between users and producers.

The Namibia needs assessment was initiated by a multi-agency mission consisting of a group of international advisors to the CSO who designed a framework for social, demographic, and economic statistics, and took into account available resources and possible international assistance. The assessment of statistics requirements was based on the conclusions of a Users/Producers workshop that provided recommendations for developing statistics in Namibia, including (i) setting statistical programs covering a broad range of policy areas, with a timetable; and (ii) adopting a National Household Survey Program.

The Chad experience used an ad-hoc team of international experts who carried out a need assessment with assistance from existing institutions. The review considered how coordination between suppliers and users of statistics could be improved. Reliability and timeliness of out-

puts were considered under three categories: multisectoral and economic reports, sectoral reports, and occasional reports. A two-part strategy was proposed for strengthening local capacities: Short-term measures focusing on immediately improving the production and dissemination of existing data; and (ii) medium and long-term measures to strengthen institutional capabilities in the areas of data collection, storage and analysis. Specific actions included: (i) creating a permanent monitoring capability; (ii) strengthening producer's capacities through increased human and material resources.

Case Study 5 An Example of a Training Needs and Human Resource Management Assessment

Introduction

Background

This case study is based on a report prepared in 1999 by consultants for the National Statistical Office (NSO) in Malawi. The purpose of the report was to review the organizational development needs of NSO, to assist the agency to strengthen its human resources management and to prepare a training plan. The report was part of a long-term strategic support program for the NSO financed by the Department for International Development in the United Kingdom. Thanks are due to the Commissioner for Statistics and DFID for their permission to use this material.

The National Statistical Office is the main official statistical agency in Malawi. It is a government department headed by the Commissioner for Census and Statistics and reports to the Ministry of Finance and the Office of the President and Cabinet (OPC). It operates through a legislative framework governed by the 1967 Statistics Act.. The NSO developed its first strategic plan in 1996. The plan was agreed by the Minister of Finance, and covered a five-year program from 1996 to 2000. The plan includes a number of changes, improvements and activities, including a revised structure and the creation of a National Committee for Statistics (NCS). In 1999 the staff complement was 346, but only 222 posts were filled.

Development of the training and human resource management plan

Since NSO already had a Strategic Plan in place, the training plan and the development of policies to guide and strengthen human resources management (HRM) was developed within this framework. It was felt important to send the right signals to staff and management about the coherence of the training plan and how it was developed.

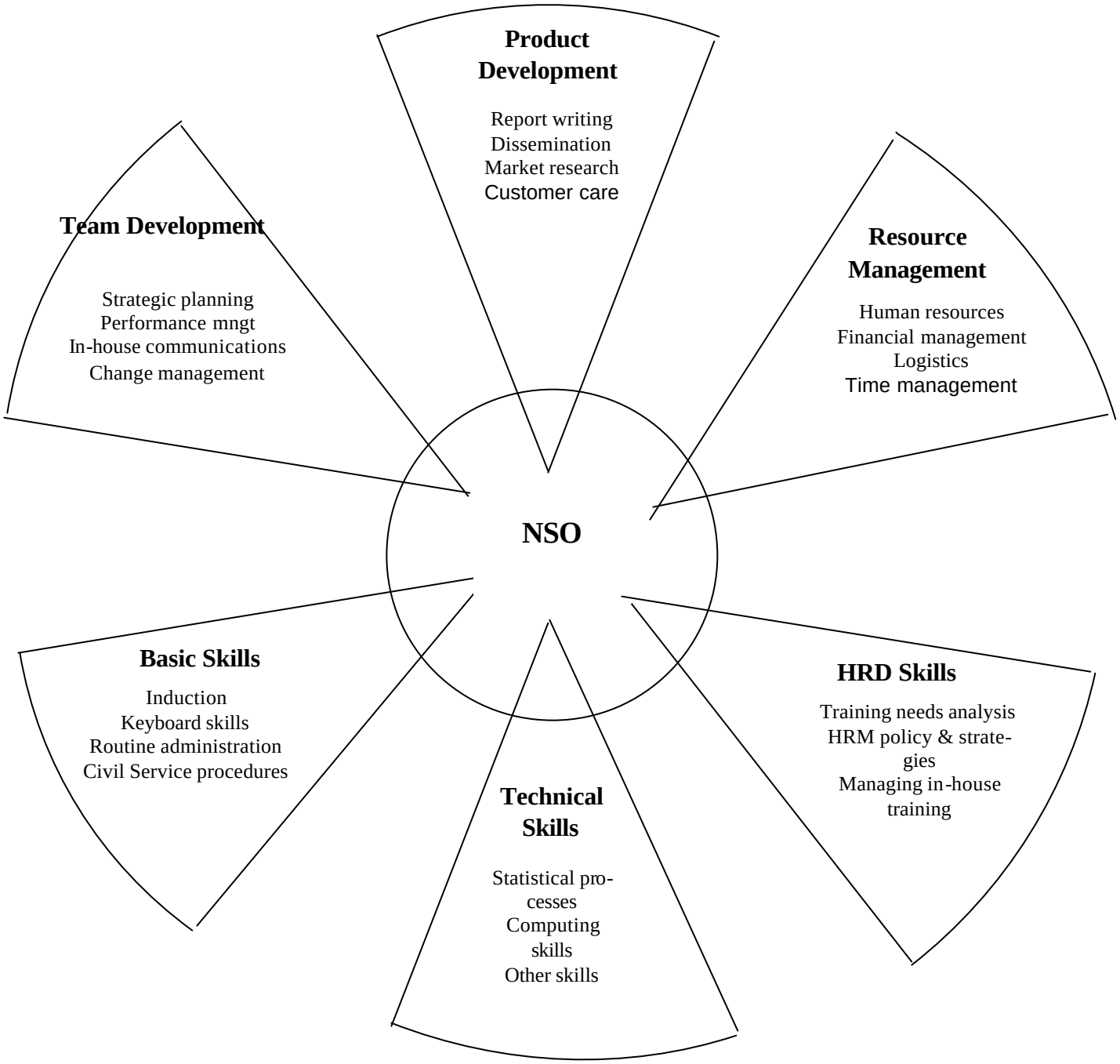
Responsibility for the formulation of HRM policy and its implementation rests with the Human Resources Division of NSO, under the overall control and guidance of the Training Committee. The Division's functions include identifying training opportunities, assessing training needs and evaluating training activities.

Based on interviews with staff and the Strategic Plan and Functional Review, an overall framework in which to locate the types of staff development and training options appropriate for the NSO was developed (see Figure 1). This framework contained six broad training and development areas.

- Resource Management – which includes all aspects of 'people management' and the skills attached to that, such as delegation, time management, supervision skills and so on.
- Human resource management (HRM) – which includes specialist HRM skills such as Training Needs Analysis, HRM policy development and managing the Training Plan.
- Technical Skills – the largest segment for NSO in that this includes all areas of statistical training and development options, as well as the specialist cadres such as cartography, accounts and others.
- Basic Skills – including areas such as induction programs, basic computing and word processing skills, administrative tasks, and the skills needed by support staff.

- Team Building – the skills needed to build up a high performing team of staff, understanding the roles and responsibilities of each section and each other.
- Product Development – given that NSO is known through its 'products' it is crucial that a special focus is placed on the latest techniques, through printed and electronic media.

Figure 1. Areas for training development



Identified Training Needs

Training areas	Skill Needs	Target Group	Training Methods
Product development	• Statistical report writing • Presentation of statistical reports • Computer and Internet based dissemination • Marketing products • Market research • Communicating with customers	• Professional statisticians • Other people responsible for report and bulletin preparation	• In-house • Formal courses • Secondment/ mentoring etc.
Resource management	• Time management • Delegation • Meetings • Supervision etc. • Financial management • Logistics	• All senior and middle-level managers • Others with relevant responsibilities	• Formal
Human resource management skills	• Training needs analysis • Managing in-house training • HRD policy and strategy • Monitoring and evaluation of training	• HR managers	• In-house • External (Certificate/Diploma)
Technical skills	• Statistical procedures and processes • Data handling and manipulation • Design and implementation of surveys and censuses • Sampling theory and estimation procedures • Statistical analysis • Computing skills • Standard packages (word processing, spreadsheets etc.) • Database management and GIS • Specialist statistical packages	• All of the Statistical Cadre • Other specialists	• In-house • Informal, on-the-job • Self-tutorials • Short courses • Academic training (certificate, diploma, degree, masters)

Training areas	Skill Needs	Target Group	Training Methods
	• Other skills • Cartography • Printing • Accounting • Administration and stores		
Basic skills	• Induction • Civil service procedures • Basic computer and keyboard skills • Routine administration • Target Groups • All new entrants • Registry • Administrative staff • Statistical clerks • Other support staff	• All staff	• Commissioned courses • In-house
Team development	• Change management • Managing the strategic plan • Performance management • In-house communications	• All staff	• Formal courses • In-house

Case Study 6 Examples of Recent Statistical Legislation

The statistical law is the lifeline of a well functioning statistical system. Most countries have a formal statistical law where the responsibilities and functions of the statistical agency are spelled out and the organizational structure of the national statistical system is described. The statistical law also governs the relationships between data suppliers and users, including the provision of individual information, the rules for the obligatory supply of information, and guarantees of confidentiality and non-disclosure. Below are some examples of statistical laws raging from more detailed to very short one.

New Zealand has a relatively more detailed statistical law enacted in 1975. It was an act to consolidate and amend the Statistics Act 1955; and to make provision for official statistics; for a Department having the name Statistics New Zealand and the office of Government Statistician; and for the independence of the Statistician in the execution of his duties. It consists of six parts and includes 50 articles.

ANALYSIS

1. Short Title
2. Interpretation

PART I: OFFICIAL STATISTICS

3. Official statistics and co-ordination
4. Classes of official statistics
5. Necessity to inform Statistician of details of official statistics
6. Minister to approve all statistical surveys
7. Periodic reviews
8. Sampling
9. Joint collections
10. Meetings of statisticians and users of statistics
11. Duty of all collectors and compilers of official statistics

PART II: DEPARTMENT AND GOVERNMENT STATISTICIAN

12. Department
13. Office of Government Statistician
14. Duties of Government Statistician
15. Independence of Government Statistician
16. Annual Report
17. Deputy Government Statisticians
18. Appointment of other employees
19. Employment of persons for collection of statistics
20. Evidence of appointment

20A. Proof of signature of Statistician and certain other persons

21. Declaration of secrecy

PART III: CENSUS OF POPULATION AND DWELLINGS

22. Provisions to apply to census of population and dwellings
23. Census of population and dwellings
24. Particulars to be collected at census
25. Duty of persons to obtain census schedule

The Law of the **Republic of Belarus** on State Statistics was approved by the Council of the Republic on January 30, 1997. This Law specifies the procedure for organizing state statistics, governs legal relations associated with the statistical activity of state statistical authorities, ministries, and other central administrative authorities that keep state statistics. The law has six major sections with 17 articles.

2. Sphere of Application of the Law
3. Basic Tasks and Principles of State Statistics

SECTION II. ORGANIZATION OF STATE STATISTICS
4. State Statistical Authorities
5. Ministries and Other Central Authorities That Keep State Statistics
6. Financing and Material and Technical Supply of the State Statistical Authorities
7. State Statistical Observations

SECTION III. SUBMISSION AND UTILIZATION OF STATISTICAL INFORMATION
8. Submission of Statistical Information
9. Using Statistical Information

SECTION IV. RIGHTS AND OBLIGATIONS OF STATE STATISTICAL AUTHORITIES
10. The Rights of State Statistical Authorities
11. Rights of Ministries and Other Administrative Authorities That Keep State Statistics
12. Obligation of State Statistical Authorities
13. Obligations of Ministries and Other Central Administrative Authorities That Keep State Statistics

SECTION V. LIABILITY FOR VIOLATING THIS LAW
14. Liability for violating the Procedure for Submitting Statistical Reports
15. Liability for Violations Committed while Using Statistical Data

SECTION VI. FINAL PROVISIONS
16. The Law of the Republic of Belarus "On state statistics" shall come into force in ten days after its publication.
17. The Council of Ministers of the Republic of Belarus within two months shall adopt the procedure of approval of the plan for statistical work (observations)

The statistics act of **Republic of South Africa** was enacted in 1999 by the Parliament to provide for a Statistician-General as head of Statistics South Africa, to establish a Statistics Council and provide for its functions; to repeal certain legislation; and to provide for connected matters. Statistician-General is responsible for the collection, production and dissemination of official and other statistics, including the conducting of a census of the population, and for co-ordination among producers of statistics.

CONTENTS OF ACT
1. Definitions
2. Purpose of Act
3. Purpose of official statistics, and statistical principles
4. Status of Statistics South Africa
5. Minister’s duties and powers
6. Appointment and tenure of Statistician-General
7. Statistician-General’s duties and powers
8. Establishment of Statistics Council
9. Tenure of members of Council
10. Meetings of Council
11. Committees of Council
12. Remuneration of members of Council and its committees
13. Duties and powers of Council

14. Statistical co-ordination among organs of state
15. Entry on and inspection of premises
16. Duty to answer questions
17. Confidentiality and disclosure
18. Offences and penalties
19. References in other legislation or documents
20. Repeal of legislation, and savings
21. Short title

Indonesia had a new Statistics Act in 1997. The old Statistics Act enacted in 1960 was recently revised and improved to cope with the latest development in the demand and supply of outputs of statistical services. The new Statistics Act, i.e. the Law No. 1611997 on Statistics, was enacted in May 1997. This new Statistics Act gives a bigger and heavier role to the BPS (the Statistics Indonesia) and describes a clearer distribution of responsibility between the BPS, the statistical units in other government agencies and the private sector. The BPS is responsible for the compilation of basic statistics, i.e. statistics used by policy makers and general users for a broad range of purposes. The respective government departments compile the sectoral statistics, which are used internally to support the functions and duties of the respective agencies. While the private sectors may collect statistical data to fulfill the specific needs of the business sector, which is usually in the form of micro data. The BPS also have a function to be the reference center or clearing house of statistics, since the results of all sectoral statistics should be submitted to the BPS. Beside that any private company conducting statistical activity should provide the synopsis of the statistical activity to the BPS. Another function of BPS is to be the coordinating agency of statistical activities both at the central and regional (provincial, district) levels.

Case Study 7 Performance Agreements for Statistical Agencies

Since they are providers of essential information for public debate, and for decision making at various levels of society, national statistical agencies (NSA"s) have to take the quality of their products and services very seriously. The performance of NSA's and in fact of government services have come under closer scrutiny in many countries, hence quality management has lately become a focal point for many NSA's. In national statistical agencies there appear to be various approaches to quality management, since there are many sides to the quality of official statistics. As universally agreed official statistics must be relevant, timely and accurate, but they should also be produced in a cost-effective manner, and without too much of a burden for data providers.

Below three examples of such programs are presented.

In 1996, **Statistics Netherlands (SN)** adopted a kind of comprehensive quality program of its own, laid down in the form of a business plan, which is about the quality guidelines and statistical auditing. The focus of statistical auditing in this sense is on the quality of the statistical production process. The SN Business Plan sets out six major objectives:

- A relevant work program.
- A substantially reduced response burden.
- Effective statistical information.
- Comprehensive quality management system.
- Adequately trained and motivated staff.
- An efficient, well managed, flexible organization.

The ultimate aim of SN Business Plan is to create a vital organization with a manageable budget.

Statistical auditing introduced in SN Business Plan is perceived as a form of help and advice to achieve improvements, not a form of policing in order to find out where things are not going as they should go. If the auditors, however, discover weaknesses and unprofessional approaches, they will certainly report these and discuss them with management. Also, in the final discussion about the audit reports, agreements are made about how to achieve specific improvements.
Statistical auditing has three major purposes:

- to actually find out what is being done about quality management in statistical departments
- to generate suggestions on how to improve quality management
- to find out what the best quality practices are and to incorporate these into the guidelines for quality systems.

To obtain experience with statistical auditing, SN carried out two pilots in 1996. As one of the results of the pilot audits, the following code of conduct for audits was agreed.

- The main purpose of statistical audits within the SN is to help identify statistical sectors what the weak and strong points of their statistical processes are and how these may be improved. In a way, audits are liking presenting a 'mirror' to the auditees.
- There will be an audit plan, as part of the management contracts between division managers and the Director-General. Each statistical process in a statistical department will be audited once every five years.

- Audits are organized and moderated by an audit secretariat, which is part of the DG staff
- Audits are carried out by teams of three auditors, selected on the basis of specific expertise. A pool of about 25 auditors will be trained and regularly employed. Their performance will regularly be monitored by the audit secretariat
- Before an audit starts, the procedures and planning will be agreed with the department manager.
- The department manager is responsible for: the supply of proper documentation, including a list of employees and their tasks, work instructions, checklists, handbooks, existing guidelines for quality control. He/she also appoints a contact person from his sector.
- In a workshop, the audit secretariat briefs the audit-team on how the audit will be carried out. Also, the scope of the audit (including any points which deserve special attention) is formulated.
- The audit secretariat organizes an introductory meeting, in which the scope and procedures are discussed. After that an interview scheme is drafted (implying, among other things, the final selection of the people to be interviewed). The maximum number of interviews per day is three, by two auditors, because interviews are to be relaxed. Interview reports are only for auditors. However, all reports are given to auditees for correction.
- The audit team drafts first report, which is first discussed with the audit secretariat.
- One audit secretary and the lead auditor discuss the first draft with the department head and contact person.
- The audit report is subsequently discussed in a meeting with department head and auditees.
- The final audit report is then written and sent to the department manager. A copy is sent to the Director-General of SN.
- The department manager has three months to react and to draft a plan for improvements on the basis of the recommendations.
- One year after the audit has taken place a questionnaire is sent to the department manager in order to check what has been done with the recommendations.
- After every five audits, the Audit Secretariat writes a summary report about important results, which may be beneficial for other departments as well. This report is discussed by the Management Committee for Auditing and Quality Care and is also widely circulated.

In **New Zealand** a quality and risk assessment framework has been developed as a basis for assessing the risk of an output area or a collection not achieving expected quality or performance standards. It has been produced primarily as a guide for assessing the risk of quality problems, but can also point to where there is a need for additional investment in statistical and IT infrastructure to reduce risk or improve performance in areas of corporate concern. Regular assessments should show improvements in those areas underachieving, particularly areas needing attention to ameliorate risk of inadequate performance.

Risk is judged across four broad dimensions, and no one of these aspects can be considered in isolation from the others. In particular, a balance is required across aspects of quality, timeliness and cost.

1 RELEVANCE AND DIRECTION

1.1 Relevance

Key indicators are:

- good understanding of who are the key users and emerging new stakeholders
- information needs and associated quality standards are regularly assessed and defined through user consultation

- good understanding exists of policy directions and issues, and the context within policy is developed
- highest priority needs are being met
- information is produced at the right frequency to allow timely monitoring of changes
- information provides an estimate of what the key users want to measure, rather than something else and users are left to make adjustments
- questionnaires, definitions, classifications reflect contemporary needs and situations
- a balance exists in the frequency and detail of outputs across priority needs so that less important needs are met less frequently
- key user commitment and funding of lower priority needs when necessary

Other factors to consider are

- what are the key unmet needs in priority order?
- what would go if 20% less budget and what extra would be done with 20% more

1.2 Expertise

Key indicators are:-

- staff with good knowledge and understanding of subject field, source data, relevant concepts and classifications, current and emerging issues, statistical elements of operations
- expertise is maintained and not vulnerable to key staff changes
- good, up-to-date and accessible documentation
- staff in touch with counterparts in other statistical agencies, key users and relevant experts
- good understanding of key uses of data, including by Maori
- good understanding of the concepts and measurement issues related to Maori statistics and small populations in general
- contributions made to relevant professional associations, international developments

1.3 Adaptability and responsiveness

Key indicators are:-

- source collection infrastructure support a mix of core and 'supplementary' data collection
- flexible systems able to quickly respond to requests for new information needs
- low cost adaptability of input collections and output systems to changing needs

2 QUALITY

2.1 Accuracy

Key indicators are:-

- quality measures and indicators regularly produced and monitored
- mean square error meets standard for key user needs
- definitions of data consistent with both user and provider understanding
- assumptions on which key measures are based remain valid
- a revisions policy which balances the need to inform users of improved estimates with possible confusion from insignificant changes
- insignificant and consistent differences between preliminary and final estimates
- sample redesigned or reselected regularly to maintain sample errors within quality standards

2.2 Coherence

Key indicators are:

- all source data measured in accordance with standards (frame, statistical units, definitions, classifications, processes)
- data presented in a framework, along with other relevant data from other sources
- long term time series are available for repeated measures, with explanations or adjustments for breaks in the series
- input data from different sources are confronted and reconciled
- output data is consistent or reconcilable with other sources
- concordances available to allow data to be related to previous classification versions or related classifications
- consistency between aggregates and components
- key classifications are maintained so that comparability is maintained over time to allow comparisons required by users while providing measures of contemporary and emerging events

2.3 Interpretability
Key indicators are:

- analysis undertaken to find and present key findings of and relationships within data
- seasonal and trend analysis and other standard adjustment techniques are undertaken to enhance the usefulness of the data and reduce problems of interpretation and comparisons
- presentation standards used for tables and graphs
- information on methods, concepts etc is up-to-date and readily available to users

2.4 Timeliness
Key indicators are:

- achieved timeliness meets key user needs
- the relative importance between timeliness and accuracy is understood, and this balance is met
- preliminary results produced to meet time constraints of key users
- release dates are published in advance and met

3 ACCESSIBILITY AND SERVICE
3.1 Accessibility of information
Key indicators are:

- main findings are made widely available
- information on data availability (published and unpublished) is readily known
- catalogues/directories are available for field of statistics
- information is available in formats and media required by users
- data are made available in all media at the same time
- release dates are announced in advance
- information is affordable
- new technology is being used to improve the presentation and accessibility of data

3.2 Client service
Key indicators are:

- expert assistance readily available
- standards set for time taken to meet requests
- standards met for time taken to meet requests
- signals of user satisfaction and dissatisfaction with products and services

- support for user funded surveys to meet lower priority or special needs
- revenue generated, particularly trends (as an indicator of the extent of servicing provided)

4 MANAGEMENT

4.1 Efficiency

Key indicators are:

- use of technology to achieve efficiency, timeliness or quality
- measures of efficiency monitored for all production processes
- cost parameters available and used in design of collections
- quality and costs for inputs set on the basis of their contribution to overall error and quality of outputs
- low cost systems maintenance required

4.2 Respondent management

Key indicators are:

- forms in source collections tested with respondents
- selection methods used to manage overlap and rotation of respondents
- administrative data used wherever possible
- good, up-to-date understanding exists of respondent information sources
- information provided to respondents on purpose of collection etc
- help/support system available
- measures of load produced regularly
- sound security of information
- confidentiality checking of releases

4.3 Management of risk and performance

Key indicators are:

- communication channels established and used regularly with key and other users
- survey infrastructure exploited to produce irregular and less frequent demands at marginal cost off core surveys
- standards set and regularly reviewed for key outputs
- indicators of quality (including timeliness) regularly measured and monitored
- problems and suggestions for improvement are logged and action tracked
- systematic feedback to collection design from errors and problems identified in analysis, editing, field etc
- documentation on standards, processes, etc up-to-date and accessible
- outputs systematically analyzed and validated before release
- systems integrated with corporate infrastructure systems
- information on methods, etc in SIM and available to users
- information on achieved quality reported to users
- continuous improvement philosophy to maintain relevance
- regular independent review
- data archived
- adherence to security and confidentiality policies
- release process so that all releases consistently available at release time
- metadata on SIM updated at time of release
- requirements of Statistics Act met

Australian Bureau of Statistics (ABS) Action Plan discusses performance-monitoring issues in detail. ABS activities in respect of evaluation and continuous improvement processes can be broadly grouped under five activities:

- corporate governance processes,
- the planning process including the review and improvement framework,
- Statistical Clearing House,
- the collection and analysis of statistics on the use of services,
- system enhancements or upgrades.

1 Corporate Governance

The scope of internal management and review and external advisory and review bodies consists of:

The Australian Statistics Advisory Council (ASAC): The Australian Statistics Advisory Council was established by the Australian Bureau of Statistics Act 1975 to assist the ABS to fulfil its role. The Council provides valuable input to the directions and priorities of the ABS work program and reports annually to Parliament. Three Council meetings are held each year in March, July and November.

Senior Management Committees: An important feature of ABS corporate governance is the role played by senior management committees such as the Executive Management Committee, Audit Committee, Human Resource Strategy Committee, and the Information Resources Management Committee. These committees are active in identifying ABS priorities, ensuring appropriate planning and implementation to address these priorities, and effective monitoring of ABS activities.

The operations and performance of the ABS are subject to both internal and external scrutiny. Internal scrutiny takes the form of:

- periodic reviews of statistical collections and service functions;
- benchmarking, which is a key part of the ABS strategy to assess the value for money of its statistical outputs and internal service activities;
- annual reports from all Assistant Statisticians (in Central Office) and Regional Directors to the Executive Management Committee Meetings as discussed above; and
- an internal audit program, conducted by external service providers, covering different facets of ABS operations and overseen by the Audit Committee.

External scrutiny takes the following forms:

- consideration by the Australian Statistics Advisory Council of ABS priorities and proposals for the forward work program. Council advises the Australian Statistician and the Minister, and produces its own annual report on issues considered and advice given;
- audits by the ANAO, either of ABS operations specifically or as part of cross-agency audits;
- audits of ABS financial statements by the ANAO;
- review of statistical activity by various advisory committees and user groups. These include standing and ad hoc expert advisory groups, comprising key government, business, academic and community representatives; and
- external benchmarking of IT services.

2 The Planning Process including the review and improvement framework

The provision of a high quality national statistical service is a complex management exercise because of the diverse nature of user requirements and, in most instances, the lead time required to develop statistical collections.

Each year, relative priorities and competing resource requirements of all program components are formally and extensively considered by senior management. Proposals from managers of program components are considered by senior management, generally following consultation with major users. The proposed forward work program and resource estimates which emerge are then considered by the Australian Statistics Advisory Council (ASAC). The work program is finalized in the light of ASAC advice.

3 Statistical Clearing House

The Small Business Deregulation Task Force recommended in its 1996 report More Time for Business that statistical collections affecting 50 or more businesses and run by, or on behalf of, Commonwealth government departments and agencies be subject to a central clearance process.

The ABS was asked to administer the clearance process and the Statistical Clearing House was set up on 1 July 1997 for this purpose. Clearance operations began on 1 December 1997, with the aim of examining every Commonwealth government statistical collection (including ABS collections) by June 1999, starting with the largest repeating surveys, and reviewing them periodically. Of the 117 completed reviews undertaken in 1999-2000, all but three have resulted in approval to proceed. However, Statistical Clearing House intervention has resulted in 30 instances of improved survey design and/or reduced provider load.

4 The Collection and Analysis of Statistics on the Use of Services

A report on the use of ABS information services is prepared as part of the annual reporting of Assistant Statisticians to the Executive. The major statistics produced include sales of publications, consultancies undertaken, use of the National Information Service and electronic dissemination.

In addition to the statistical analysis of use of ABS information services, ABS contracts market research organizations to provide feedback on user satisfaction with the services provided.

5 System Enhancements or Upgrades

Matters of strategic significance concerning data and information management and related policy, and major issues relating to the application of information and communication technology in the ABS are considered by the Information Resources Management Committee (IRMC). The ABS, through this committee, will review progress against the Online Action Plan every 6 months and formally update the plan annually.

Strategies to ensure that the organization achieves agreed standards

Issue	Standard or guideline	Implementation requirements*	Progress towards implementation

Information provision	Online Information Service Obligations	New material - 1 June 2000, existing material - 1 December 2000	Substantially completed with expectation of meeting December deadline.
Metadata	Australian Government Locator Service Metadata Standard	As above	Assessments completed and working towards December deadline
Electronic publishing, record-keeping and archiving	Guidelines for Commonwealth Information Published in Electronic Formats E-Permanence Standard	As above	Completed
Accessibility	Discrimination Act Advisory Notes World Wide Web Access: Disability Web Content Accessibility Guidelines	1 December 2000	Requirements have been assessed and development progressing towards the December deadline
Authentication	Gatekeeper: A Strategy for Public Key Technology use in the Government	Ongoing	Compliant
Privacy	Guidelines for Federal and ACT Government World Wide Web sites	1 June 2000	Compliant Privacy statement on website? Procedures and systems comply Privacy policy statement exists?
Security	Australian Communications Security Instructions - 33	Ongoing	Compliant and regularly review

Case Study 8 Review of Customer Relations

National statistics agencies provide information for a wide spectrum of users both within and outside their respective governments - including policy makers, administrators, planners, researchers, activists, citizens, students, and media representatives. To identify the needs of users, therefore, is important for national statistics agencies to carry out their responsibilities. The needs of users can be explored informally, by forming advisory committees or by undertaking formal surveys. The task is difficult and requires continual alertness to the changing needs of users and the existence of potential users. The agency should engage in scientific cooperation with professional associations, institutes, universities, and scholars in the relevant fields to determine the needs of the research community and insight on potential uses. Below are some examples from different countries about user agency relations.

In **Indonesia** a Statistical User Forum has been established. It is a non-structural and independent organization which has a task of giving advice in numerous aspects of statistics, asked or not, to Statistics Indonesia. The advice can be provided in periodical or casual bases. The Forum consists of government, NGOs, experts, professionals, and honor citizens.

Pakistan has established Panels and Working Groups on different statistical subjects under Technical Advisory Committee of the National Statistical Council that represent the data users. These Panels/Working Groups are comprised of the members drawn from concerned federal and provincial government departments, while nonofficial members are drawn from universities, research institutions and relevant organizations of private sector. Meetings of these Panels/Working Groups are held regularly, at least once in a year, to discuss relevant issues relating to the specific field of statistics and to seek their solution.

For example, planning of a census is started in consultation with data users to accommodate their data demands. Advisory Committee and Sub-Committees are formed with the terms of reference to consider various technical aspects of census taking and to recommend topics for formulation of census questionnaires. The questionnaires prepared are then pre-tested in the field and got approved from the Government of Pakistan before conducting the census.

In Pakistan, the media is mobilized to project the importance of statistical activities of the Federal Bureau of Statistics (FBS). The FBS also releases census and survey results and price statistics, foreign trade statistics as well as industrial production statistics through press releases and conferences. A census/survey publicity program is also launched through the media to create awareness in the masses about the importance and objectives of censuses and surveys.

Thailand National Statistics Office (NSO) does not have users councils, but the NSO has close communication with its users especially the National Economic and Social Development Board, which is responsible for formulating and implementing national economic and social development plans. To serve users' need and make its products more useful; the NSO occasionally organizes meetings and seminars on statistical data required for decision making. These meetings and seminars were attended by users and other statistical producers. Also, in planning for surveys and censuses, other government agencies concerned were invited to send representatives to be members in the Steering Committee and the Working group.

Statistics Netherlands has spelled out in its business plan, SN 2000, that it will have a relevant work program to ensure that the work program of Statistics Netherlands meets the needs of the

users. Decisions about the work program are made by the Central Commission for Statistics. To assess user satisfaction, regular evaluation rounds are held among all major user groups: ministries, government research and planning institutions, organizations representing employers and employees, academia etc. In addition, to flexibly approach new user needs proposals to exchange 10% (in budgetary terms) of 'old' statistics for 'new' statistics will be made in each four-year work program. These proposals will be submitted to the Central Commission for Statistics enabling it to make real choices and to set priorities.

In the **United Kingdom** (UK) formal advisory committees are set up by government departments and agencies to provide independent advice on statistical matters. They go under a range of different names, such as consultative committees and advisory panels. Their members can be users, suppliers, other interested parties or a mixture of all three. Their great strength is that, with appropriate membership and chairs, they can provide independent and authoritative advice to the Government Statistical Service (GSS), which balances the interests of both users and suppliers.

The main advisory body is the Statistics Advisory Committee, which has been established to advise the Director of the Office for National Statistics (ONS) on the statistical work of ONS and on his responsibilities as Head of the GSS. It comprises members who are customers, data suppliers and others with appropriate knowledge acting in a personal capacity. The Director, with the agreement of the Chancellor of the Exchequer, appoints members. The Director may appoint subject advisory committees and promote and encourage the establishment of other user groups as appropriate.

There are 52 other official advisory bodies, covering a wide range of the GSS's activities. A breakdown of the number of committees by broad subject area is:

- Statistics - general 5
- Population and Migration 15
- Social and Welfare 1
- Health and Care 2
- Crime and Justice 3
- Education and Training 5
- Labor Market 3
- Transport, Travel and Tourism 5
- The Economy 3
- Agriculture 2
- Commerce, Energy and Industry 2
- Environment 2

There are numerous other official advisory bodies which, while not specifically statistical, may be seen as related or which may be used on occasion as mechanisms for liaison on statistical matters. They are an important part of the overall framework for consultation. For example, there are a number of Department of Health/NHS Committees concerned with health information systems. The Advisory Panel on Deregulation has an interest in the burden of statistical form-filling on business. And Customs and Excise has formal consultative committees on both customs and VAT matters, which have been used to consult on aspects of Intrastat, the statistical system for measuring intra-EC trade.

In addition to using formal advisory bodies, members of the GSS take every opportunity to consult interested parties wherever appropriate using mechanisms best tailored to the task. Consultation - with users, suppliers and other stakeholders - is important for:

- planning services to best meet the needs and expectations of users, while keeping the load on suppliers to a necessary minimum
- monitoring the effectiveness of services and the load placed on suppliers
- prioritising services and resources
- setting relevant performance standards
- fostering good relations
- providing early warning of problems.

Case Study 9 The Development of a Poverty Related Information Management System

In many poor countries, the quality of national statistics and the timeliness with which they are produced have been issues of considerable concern for a number of years. Many countries have embarked in the wake of the PRSP on a major program to upgrade their statistical systems. As in Uganda, the main agency for the collection and dissemination of statistics has been the Statistics Department. Many of these national statistical offices have suffered from common problems such as high staff turnover, inadequate funding, lack of timeliness in delivering outputs, unevenness in quality of data produced and inability to respond quickly to new data needs.

The starting point for reform is to persuade government and donors to commit more resources to essential statistical activities. To this end, a statistical needs assessment would be undertaken, followed by the development of a statistical Action Plan. In Uganda, the main goal of such a program is to support the building of national capacity to collect, process, store and disseminate statistical information for the purpose of monitoring and evaluating outcomes and outputs of development policies and programs at both national and district levels. Several interesting and novel features have been proposed:

- The national statistical infrastructure is being extensively overhauled through the creation of a new Statistics Act, the establishment of a Statistics Board, a commitment by the government to a substantially increased budgetary allocation to statistics, and the creation of new statutory statistical body called UBOS.
- UBOS will focus on delivering a core statistical program capable of monitoring national and international development goals. The core program includes the production of timely macroeconomic and sectoral indicators for monitoring growth, and the ability to generate and disseminate primary data for monitoring poverty and tracking the outcomes of various development initiatives.
- The single most important element of the new system is the establishment of a new information technology infrastructure for an *Integrated Information Management System*. It is designed to ensure that all primary or secondary collected data are stored in a Central Depository of Data. Main output of surveys and censuses is also stored in a cleaned format ready for all further analysis and use. Given the need to disseminate statistical information, the system incorporates the concept of a centralized store of macro data or output tables.
- The setting up of this system involves the establishment of standards for receiving and storing data in databases and databanks in a common format. The main benefit of the system is to facilitate open access to the data by users, whether in hard copy or electronic form (online, Internet, CD-ROM etc.). A further feature of this component could be the construction of a GIS database.
- Given the continuous and growing demand for high-quality household survey data, a permanent *National household survey capability* is created and a 3-year *Integrated Household Survey Strategy* designed by UBOS with the close participation of users. UBOS established a core field force of mobile teams that will be used both to undertake surveys directly as well as to serve as a pool of technical support for districts who plan their own surveys.
- The enhanced statistical program will also support government in its goal to improve the quality and performance of public services and in particular the targeting of such services to the poorest and most vulnerable communities. This is to be done through the repeated administration of an annual *National Service Delivery Survey (NSDS).* When the results are

coupled with public expenditure reviews, they provide a powerful instrument for evaluating the effectiveness of public expenditure programs.

- The M&E system involves also tracking administrative records of other central ministries of the social sector (Education, Health) down to district and sub-district levels, and the matching of their expenditures to their outcomes on the various population groups.

The outputs of this system would also be particularly useful for monitoring the outcomes of the new Comprehensive Development Framework (CDF) approach to development aid as well as of the Poverty Reduction Strategy. A similar approach to statistical capacity building is being used in Mozambique, where the recently-created National Statistical Institute is installing a national database system modeled on the World Bank's Africa Live Database system.

Case Study 10 Principles and an Example of a Sequenced information Strategy

Principles

A sequenced information strategy is meant as a management tool for governments and central statistical agencies to provide an enabling framework for meeting the information needs of poverty reduction strategies and economic development plans. A well-defined and cost-effective strategy ought to be implemented with secured financial and human resources, in accordance with a timeframe.

A Strategy pursues by definition a holistic scope - Poverty reduction, population well-being, takes into account all needs of policy-makers, aims to reach a realistic goal by tackling impediments, evaluating costs, and involving all partners, and identifies relevant monitorable objectives through measurable results;

An Information Strategy is geared towards generating quantitative and qualitative information relevant to monitoring input, output, outcome and impact of pre-determined objectives, an information complying with high quality standards and generated in a timely fashion;

A Sequenced Information Strategy establishes information needs hierarchy, in terms of scope and in terms of content, which would meet all partners' expectations, identifies indigenous and exogenous funding capacities, and plans a series of actions sequenced in time - short-, medium- and long-term interventions - and stemmed on existing systems.

Examples

Uganda:
The monitoring strategy of the Poverty Eradication Action Plan (PEAP) is designed for two main purposes. First, it is essential to monitor progress in order to continually inform key agents involved in the process. Encouraging a two-way flow of information between beneficiaries, service providers, and policy makers is an essential component of the PEAP. In this way, the design and implementation strategies can be continually modified to build on what works, and to avoid repeating mistakes. Second, the monitoring strategy will help to build accountability. Where targets are set, the Government will expect to account for its successes or failures in achieving them, though it is understood that these successes and failure sometimes depend on factors outside Government's control.
Poverty monitoring involves a large number of institutions including the Poverty Monitoring Unit, the Uganda Bureau of Statistics, and the Uganda Participatory Poverty Assessment Project.
Five aspects of the system are worth noting.

- Household surveys are being used to prepare high-quality estimates of trends in poverty and the published reports provide much useful information.
- Participatory work has shed light on numerous aspects of poverty in Uganda and has immediately influenced budgetary allocations on water supply and the priority given to improving security.

- There is a need to develop indicators for performance in all sectors. This is being done by sectoral ministries, and the Poverty Monitoring Unit has also developed a list of indicators in cooperation with the districts.
- The institutional provision for monitoring the PEAP is found in the preparation of the *Poverty Status Repor*t. It synthesizes information on recent poverty trends, and makes recommendations on the poverty eradication strategy, to be incorporated in future PEAP revisions. The PEAP will also be revised every two years.
- Finally, there is a proposal for a Geographical Information System which would link existing sources of data and allow the spatial distribution of poverty to be studied in more detail.

Monitoring is structured at three main levels.
First, the monitoring of PEAP *outcome*s. This will focus on progress in reducing income poverty, improving health, raising educational achievement and enhancing the voice and participation of the poor. Most of the information for such outcome monitoring will be drawn from household surveys and repeated exercises under the UPPAP.
Second, the strategy will entail monitoring actions or *outputs* intended to achieve these outcomes. Data sources will include both sample surveys and data from management information systems.
Third, there will be regular monitoring of the *inputs* required for action against poverty. This consists mainly in tracking public expenditures on poverty reducing activities.

Tanzania
The Vice-President's Office (VPO) will have the overall responsibility for monitoring the implementation and impact of the poverty reduction strategy. Monitoring and evaluation (M&E) of the poverty reduction strategy will require indicators or qualitative assessments pitched at different levels.

- ***First***, M&E will require impact and outcome indicators. Impact indicators will describe progress towards overall poverty eradication objectives, while outcome indicators will refer to results of interventions (inputs) directed at poverty reduction. The government has already coordinated a consultative process to draw up a list of poverty and welfare monitoring indicators (PMI), which contains many of the required impact and outcome indicators. These indicators have been incorporated into the Tanzania Socio-Economic Database (TSED), which contains a wider set of indicators.
- ***Second***, proxy indicators will be developed to substitute for impact and outcome indicators that are more difficult to measure, or are available only at infrequent intervals.
- ***Third***, intermediate indicators will be used to provide supplementary information for assessment of progress under the poverty reduction strategy.
- ***Fourth***, resource allocation for, and expenditure on, priority poverty reduction initiatives will be monitored under the PER and MTEF framework.
- ***Fifth***, M&E will also seek to assess the extent of participatory involvement by the poor, as well as other shareholders, in subsequent revisions of the PRSP and in the implementation, monitoring and evaluation of related programs and projects.
- ***Sixth***, M&E, supported by well-targeted research, will assess the impact on the poor of policies that transcend the immediate agenda of the poverty reduction strategy.
- ***Seventh***, A set of gender-oriented indicators will be developed as an integral part of the M&E.
- ***Finally***, given financial and technical constraints, the M&E system will be limited to "core" strategic indicators that can be used readily by policy makers and other stakeholders.

Moreover, a special effort will be made to include indicators with at least two observations during the three-year horizon of the poverty reduction strategy.

INTERNATIONAL GUIDELINES FOR MAJOR DATA CATEGORIES

National accounts

System of National Accounts 1993, a publication of the Commission of the European Communities, IMF, Organization for Economic Cooperation and Development (DECD), United Nations (UN), and the World Bank, United Nations, N.Y. 1993 and earlier editions, or regional versions such as the *European System of Accounts 1995,* EUROSTAT, Luxembourg, 1996.

Labor market

R1 70 *Labour Statistics Recommendation, 1985,* as updated, Bureau of Statistics, International Labor Organization, Geneva, Switzerland. ILO recommendations can be accessed at the ILO, website: (http://ilotex.ilo.ch: 1567/public/enslish/does/recdisp.htm).

Price indices

Classification of Expenditure According to Purpose, Statistical Papers, Series M, No. 84, United Nations, N.Y., 1999; *Consumer Price Indices: An ILO Manual,* 1985, Bureau of Statistics, International Labor Organization, Geneva, Switzerland; and *Manual on Producers' Price Indices for Industrial Goods,* United Nations, N.Y. 1979. UN classifications can be accessed through the UN website (htti)://esa.un.or-g/unsd/cr/registry/regrt.asp ,l. The most recent information on the CPI can be accessed through the ILO website (http://www.ilo.org/publiclenslish/bureau/stadauideslcpi/index.htm) and on the PPI, the IMF website httR://www.imf.ora/extemal/n2/sta/te222i/index.htm.

Central government operations

A *Manual on Government Finance Statistics (GFSM),* International Monetary Fund (IMF), Washington, D.C., 1986. A revised edition of the *GFSM,* currently being prepared, is projected for publication in 2001.

Central government debt

GFSM, IMF, Washington, D.C., 1986. Other guidelines for compilers are included in *External Debt: Definitions, Statistical Coverage and Methodology,* and *Debt Stocks, Debt Flows, and the Balance of Payments,* publications of the Bank for International Settlements (BIS), the IMF, DECD, and the World Bank, Paris, France, 1988 and 1994, respectively.

Monetary and financial statistics *Monetary and Financial Statistics Manual,* IMF, Washington, D.C., 2000.

Balance of payments and international investment position

Balance of Payments Manual, 5`" edition, 1993 (BPMS),* IMF, Washington, D.C., 1993; *Balance of Payments Compilation Guide,* IMF, Washington, DC 1995; *Balance of Payments Textbook,* IMF, 1996; and, *Financial Derivatives: A Supplement to the Balance of Payments Manual, 5`" edition, 1993, IMF, Washington, D.C., 2000.

International reserves

BPMS, IMF, Washington, D.C., 1993, and *Data Template on International Reserves and Foreign Currency Liquidity: Operational Guidelines (provisional),* IMF, Washington, D.C., October, 1999.

External debt

External Debt: Definitions, Statistical Coverage and Methodology, and *Debt Stocks, Debt Flows, and the Balance of Payments,* publications of the BIS, the IMF, the OECD, and the World Bank, Paris, France, 1988 and 1994, respectively. Several international organizations are cur-

rently cooperating in the preparation of a new guide, *External Debt Statistics: Guide for Compilers. A* draft version of that guide was released in March 2000 under the auspices of the Inter-Agency Task Force on Finance Statistics, which is chaired by the IMF and includes representatives from the BIS, the Commonwealth Secretariat, the European Central Bank, the European Statistical Office, the IMF, the DECD, the Paris Club Secretariat, the United Nations Conference on Trade and Development, and the World Bank.

Merchandise trade
International Trade Statistics: Concepts and Definitions, Series M, No. 52, Rev. 2, United Nations, N.Y., 1998.

International services
Draft Manual on Trade in Services, revised June 13, 2000, OECD, Paris, France, is available on the OECD website (httR://www.oecd.org/sta/serv(2000)1.12df), and summaries of the draft are provided on the IMF website (http://www.imf.ore/external/np/sta/itserv/methdev.htm)

Population
UN *Principles and Recommendations for Population and Housing Census.* New York, 1996. *UN Handbook on Civil Registration and Vital Statistics Systems.* New York. 1998. UN *Indicators of Sustainable Development: Framework and Methodologies.* New York, 1996.

Education
United Nations Economic and Social Council (UNESCO) *International Standard Classification of Education.* Paris, 1997; UNESCO. World Education Indicators web site, Technical specifications: (htlp:Hunesco5tat.unesco.orelen/stats/stats.htm); UNESCO *Methodology Used in the Estimation and Projection of Adult Literacy.* Paris, 1995. UN Indicators of Sustainable Development: Framework and Methodologies. New York, 1996.

Health
OECD. *A System of Health Accounts for International Data Collection* Version 1.0. (httR://www.oecd.org/els/health/SHA l.pdf); UN *Indicators of Sustainable Development: Framework and Methodologies.* New York, 1996. World Health Organization (WHO) *Monitoring Reproductive Health: selecting a Short list of National and Global Indicators.* Geneva, 1997. *WHO International Statistical Classification of Diseases ahd 7tilqted Health Problems* (ICD9 or 10). Geneva.

Poverty
Ravallion, Martin *Poverty Lines in Theory and Practice Vol. 1.* Living Standards Measurement Survey Working Paper, World Bank, 1999. Deaton, Angus and Salman Zaidi. (forthcoming). *Guidelines for Constructing Consumption Aggregates for Welfare Analysis* (World Bank) Lipton, M. *Defining and Measuring Poverty: Conceptual Issues.* UNDP, New York, 1996. UN *Assessing the Nutritional Status of Children.* New York, 1990.